

CLAIMS

What is claimed is:

1. A multiple catheter assembly, comprising:
 - a. a first catheter having a first proximal end region, a first distal end region terminating in a first distal tip, and an outer surface defining at least a first lumen extending longitudinally therethrough between a first distal and a first proximal opening;
 - b. a second catheter having a second proximal end region, a second distal end region terminating in a second distal tip, and a second outer surface defining at least a second lumen extending longitudinally therethrough between a second distal and a second proximal opening, wherein the first lumen and the second lumens are independent from each other for facilitating simultaneous flow in opposite directions; and
 - c. wherein the outer surfaces of the first and second catheters are releasably joined for allowing the first and second distal tips and first and second proximal end regions to be at least partially longitudinally split from each other.
2. The multiple catheter assembly according to claim 1, further comprising a hub releasably attached to each of the proximal end regions of the first and second catheters, wherein the hub is longitudinally translatable along the proximal end regions of the first and second catheters.
3. The multiple catheter assembly according to claim 2, wherein the hub comprises a distal end adapted to juxtapose the first lumen against the second lumen and a proximal end adapted to separate the first and second lumens.
4. The multiple catheter assembly according to claim 2, wherein the hub is releasably securable to a patient.

5. The multiple catheter assembly according to claim 2, further comprising an ingrowth cuff disposed externally of the first and second lumens between the distal end region and the proximal end region of each of the first and second lumens
6. The multiple catheter assembly according to claim 5, wherein the hub is longitudinally translatable between the proximal end regions of the first and second lumens and the ingrowth cuff.
7. The multiple catheter assembly according to claim 1, wherein the assembly further comprises a first extension tube releasably connected to the first proximal end region of the first catheter and a second extension tube releasably connected to the second proximal end region of the second catheter.
8. The multiple catheter assembly according to claim 1, wherein the first and second catheters are releasably joined by a splittable bond extending between the outer surface of the first catheter and the outer surface of the second catheter.
9. The multiple catheter assembly according to claim 8, wherein the splittable bond comprises an adhesive.
10. The multiple catheter assembly according to claim 8, wherein each of the first and second catheters comprise a generally semi-circular cross-section, wherein the first catheter comprises a generally flat first side surface, and wherein the second catheter comprises a generally flat second side surface juxtaposed against the first flat side surface.
11. The multiple catheter assembly according to claim 10, wherein the proximal end regions of each of the first and second lumens comprise a generally circular cross section.
12. The multiple catheter assembly according to claim 11, wherein the splittable bond extends longitudinally between the generally flat first side surface of the first catheter and the generally

- flat second side surface of the second catheter, and wherein the splittable bond has a cross-sectional length significantly smaller than an outer diameter of said multiple catheter assembly as measured transversely across said multiple catheter assembly.
13. The multiple catheter assembly according to claim 12, wherein the proximal end regions of the first and second catheters comprise a transition portion between the generally circular cross-sections of the first and second lumen and the generally semicircular cross-sections of the first and second lumen.
14. The multiple catheter assembly according to claim 13, wherein the splittable bond comprises a proximal end region; and wherein the proximal end region of the splittable bond is contiguous with the transition portion between the generally circular cross-sections of the first and second lumen and the generally semicircular cross-sections of the first and second lumen.
15. A method for inserting a multiple catheter assembly into an area of a body to be catheterized, comprising:
- a. making an incision near the area to be catheterized;
 - b. providing a multiple catheter assembly comprising a first catheter having a first proximal end region, a first distal end region terminating in a first distal tip, and a first outer surface defining at least a first longitudinally extending lumen; and a second catheter having a second proximal end, a distal end region terminating in a distal tip, and a second outer surface defining at least a second longitudinally extending lumen; wherein the outer surfaces of each of the first and second catheters are releasably joined and each of the first and second lumens are independent from each other for facilitating simultaneous flow in opposite directions, wherein the outer surfaces of each of the first and second catheters are

- releasably joined for allowing each of the first and second distal tips and first and second proximal ends to be at least partially longitudinally split from each other;
- c. at least partially separating the first and second distal end regions of the first and second catheters from each other; and
 - d. inserting the first and second distal end regions of the first and second catheters in juxtaposed relation to each other through the incision and into the area to be catheterized.
16. The method according to claim 15, further comprising at least partially separating the proximal end regions of the first and second catheters.
17. The method according to claim 15, further comprising inserting a tearable sheath into the area to be catheterized prior to step (d); and wherein step (d) further comprises inserting the distal end regions of the first and second catheters through the sheath and into the area to be catheterized.
18. The method according to claim 17, further comprising removing the sheath after the distal end regions of the first and second catheters are in the area to be catheterized.
19. The method according to claim 15, further comprising attaching a tunneling device to the first and second proximal end regions of the first and second catheters.
20. The method according to claim 19, further comprising subcutaneously tunneling the proximal end regions of the first and second catheters.
21. The method according to claim 20, further comprising removing the tunneling device from the first and second proximal end regions of the first and second catheters.
22. The method according to claim 19, wherein the proximal end regions of the first and second catheters are at least partially separated.
23. The method according to claim 15, further comprising closing the incision after the distal end regions are inserted in the area to be catheterized.

24. The method according to claim 15, further comprising releasably attaching a hub to the proximal end regions of the first and second catheters.
25. The method according to claim 24, wherein a distal end of the hub is adapted to juxtapose the first and second lumens against each other and a proximal end of the hub is adapted to separate the first and second lumens; the method further comprising:
- a. placing the first and second lumens together into the distal end of the hub;
 - b. at least partially separating the proximal end regions of the first and second catheters;
 - c. placing the proximal end regions of each of the first and second catheters into the proximal end of the hub, whereby the proximal end of the hub separates the first and second catheters.
26. The method according to claim 24, further comprising longitudinally translating the hub along the proximal end regions of the first and second catheters to a desired location along the proximal end regions of the first and second catheters.
27. The method according to claim 24, further comprising releasably connecting the hub to the patient.
28. The method according to claim 15, further comprising releasably connecting a first extension tube to the first proximal end region of the first catheter and releasably connecting a second extension tube to the second proximal end region of the second catheter.
29. A method of releasably attaching a hub to a catheter, wherein the hub comprises two hingedly connected opposing portions, each portion having an inner face, at least one channel to accommodate at least one lumen of a catheter disposed on the inner face of at least one of the two hingedly connected opposing portions, and a means for releasably locking the opposing portions in the closed position; the method comprising:

- (a) placing the at least one lumen of a catheter in the at least one channel of at least one of the two hingedly connected opposing portions;
 - (b) folding the other of the two hingedly connected opposing portions over the at least one lumen thereby mating the inner face of one of the two hingedly connected opposing portions with the inner face of the other of the two hingedly connected opposing portions and fitting the two hingedly connecting portions around the at least one lumen; and
 - (c) releasably locking the hub in the closed position.
30. The method according to claim 29, further comprising longitudinally translating the hub along the proximal end regions of the first and second catheters.
31. The method according to claim 29, further comprising juxtaposing the first lumen against the second lumen in a distal end of the hub and separating the first and second lumens in a proximal end of the hub.
32. The method according to claim 29, further comprising releasably connecting the hub to a patient.
33. The method according to claim 29, further comprising removing the hub from the catheter by:
- (a) unlocking the hub;
 - (b) unfolding the two hingedly connected opposing portions; and
 - (c) sliding the hub away from the catheter.